T08090 "SE2TB260

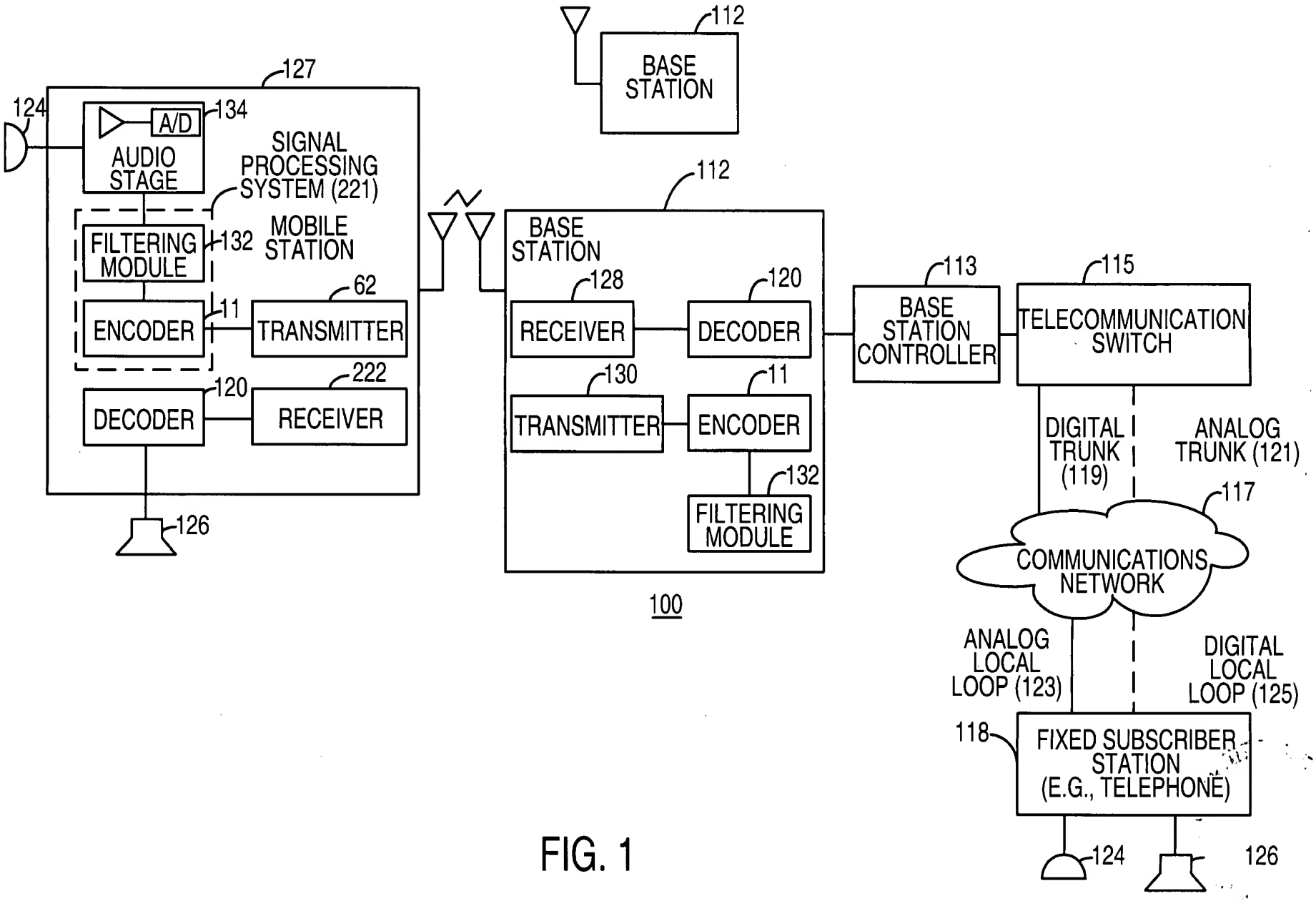


FIG. 1

Patent Application for: SIGNAL PROCESSING FOR FILTERING SPECTRAL CONTENT OF A SIGNAL FOR SPEECH ENCODING
Inventor: Gao et al.
Serial No. 09/781,735

T08090 "SE278260

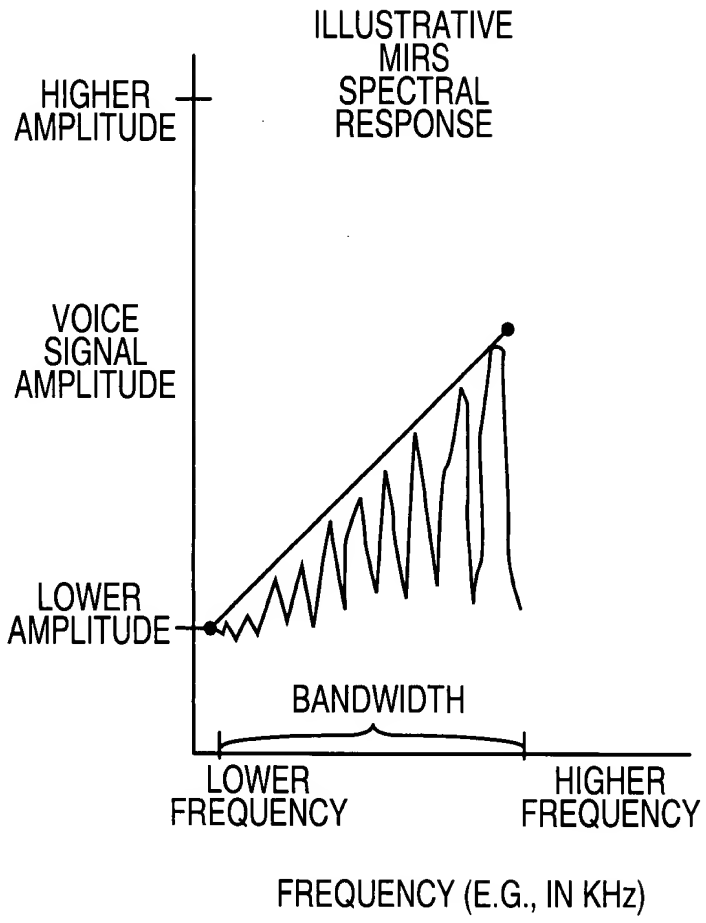


FIG. 2A

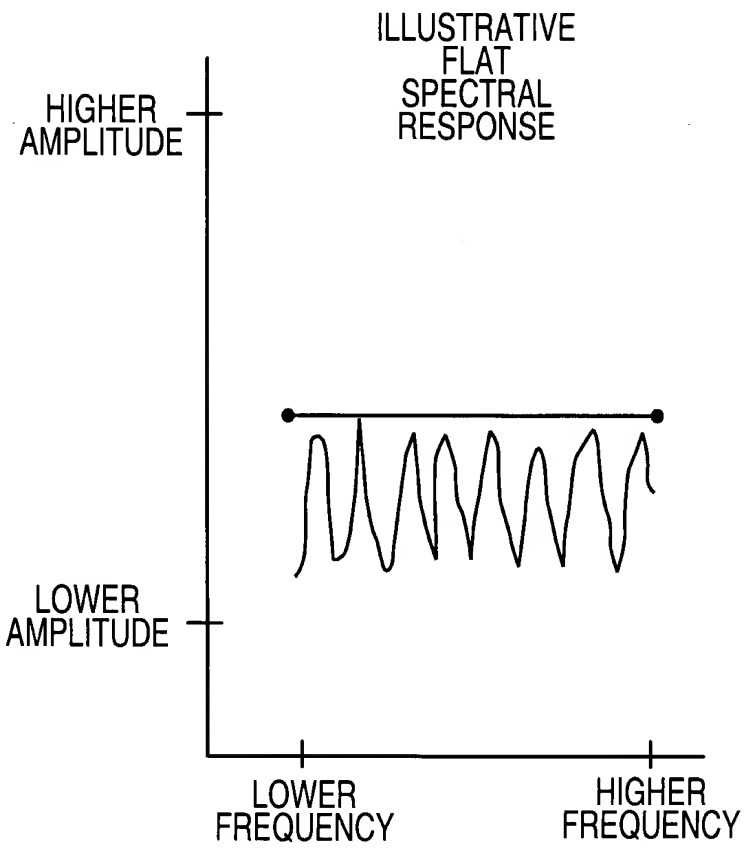


FIG. 2B

Patent Application for: SIGNAL PROCESSING FOR FILTERING SPECTRAL CONTENT OF A SIGNAL FOR SPEECH ENCODING
Inventor: Gao et al.
Serial No. 09/781,735

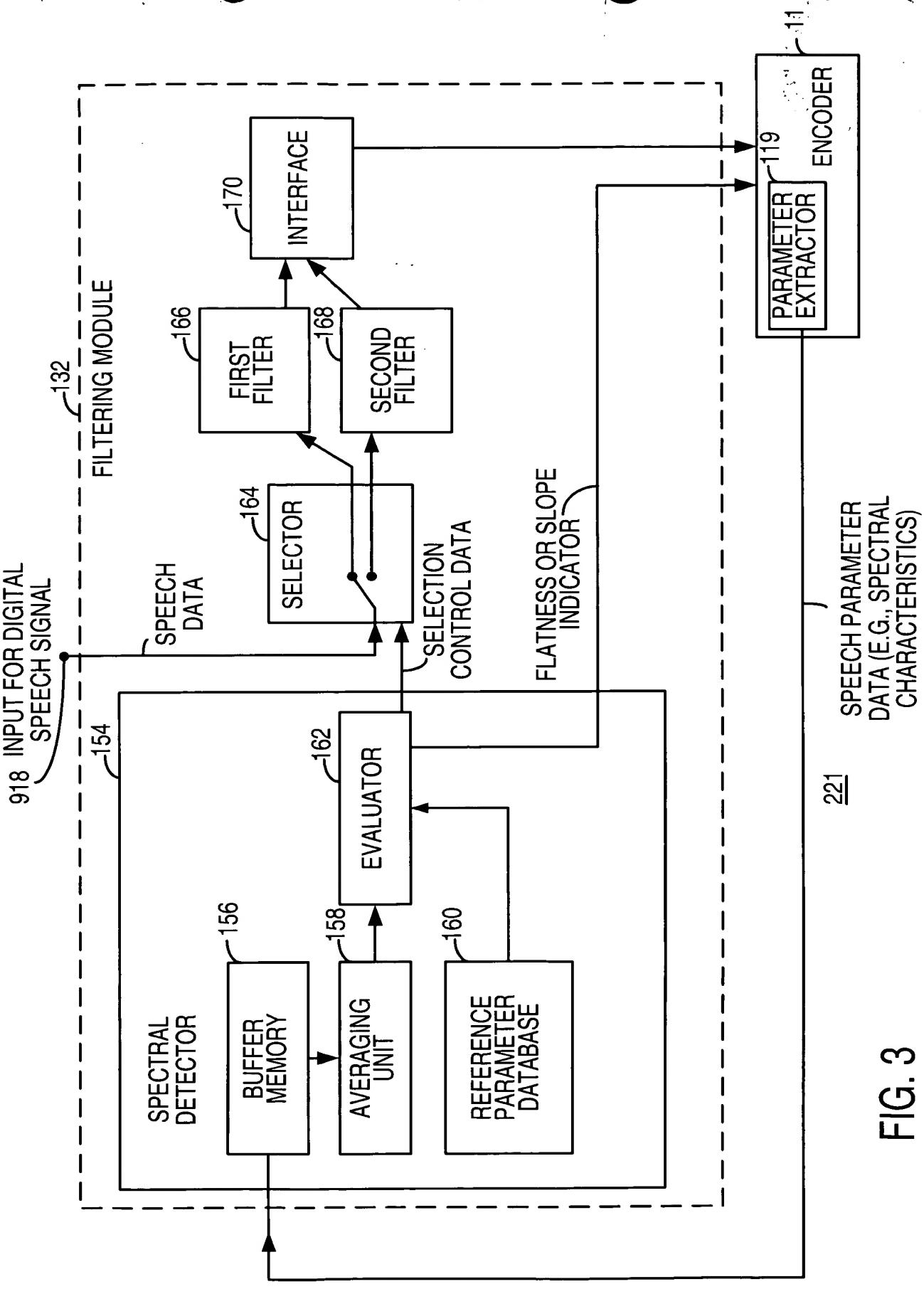

11
ENCODER
119
PARAMETER EXTRACTOR
170
INTERFACE
132
FILTERING MODULE
166
FIRST FILTER
168
SECOND FILTER
164
SELECTOR
SPEECH DATA
SELECTION CONTROL DATA
FLATNESS OR SLOPE INDICATOR
918
INPUT FOR DIGITAL SPEECH SIGNAL
154
162
EVALUATOR
156
158
160
SPECTRAL DETECTOR
BUFFER MEMORY
AVERAGING UNIT
REFERENCE PARAMETER DATABASE
221
SPEECH PARAMETER DATA (E.G., SPECTRAL CHARACTERISTICS)

FIG. 3

FIG. 4A

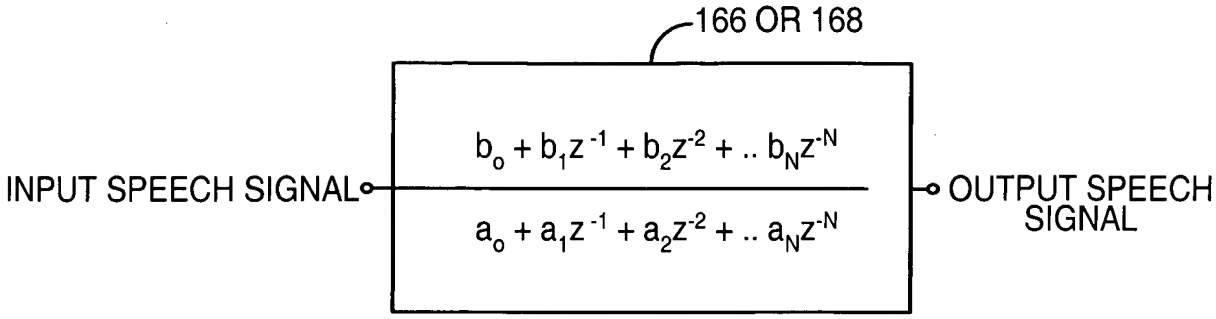


FIG. 4B

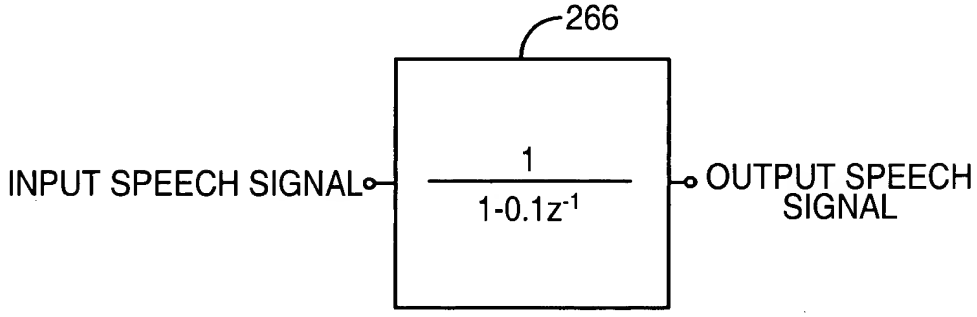
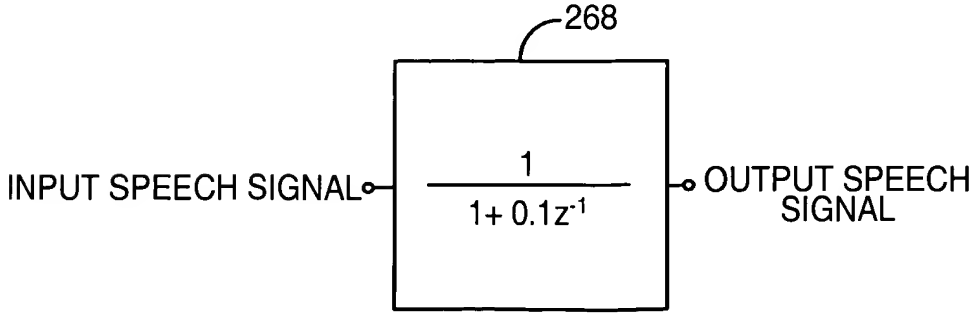


FIG. 4C



Docket: 5760.050

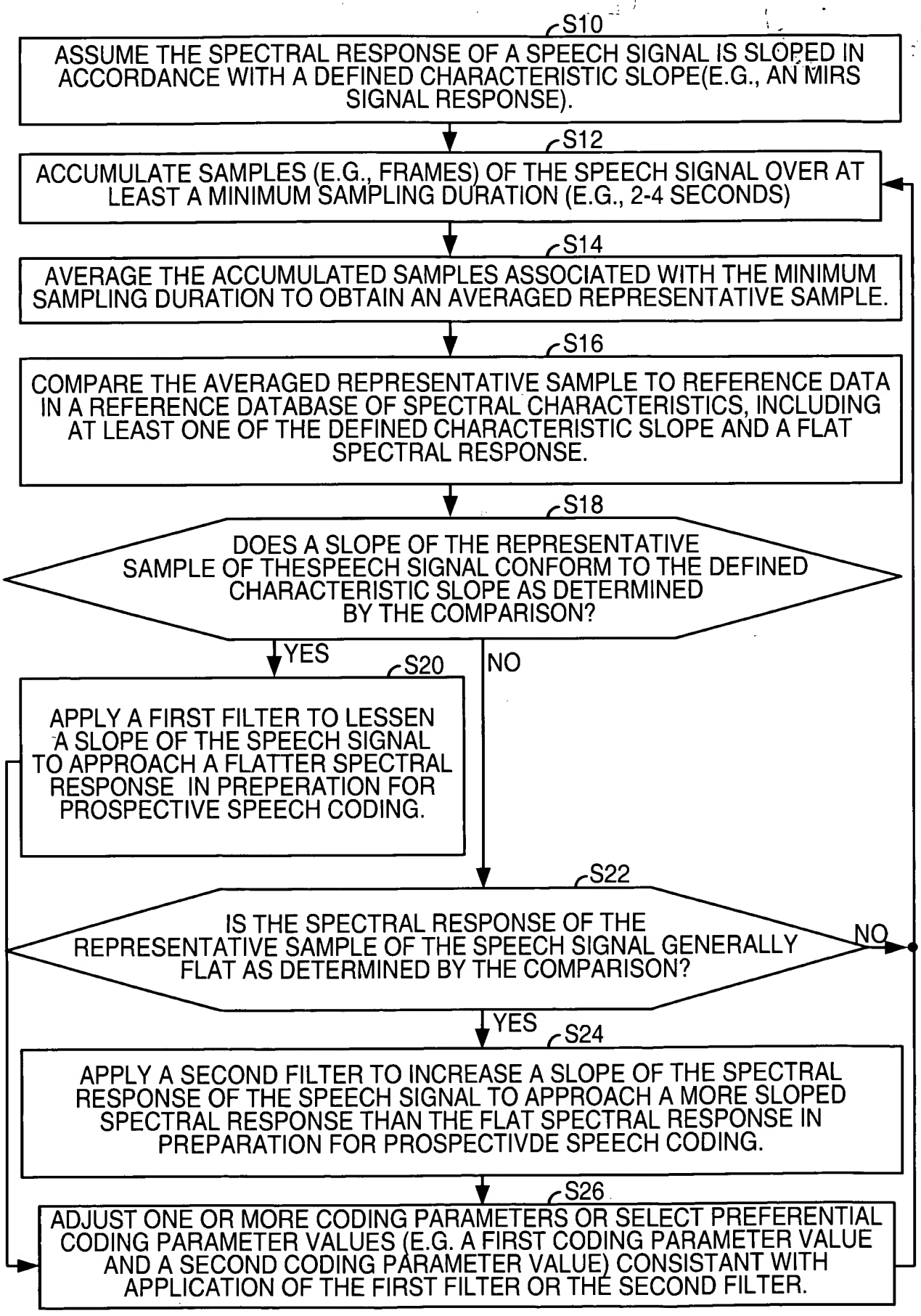


FIG. 5

T0280"5E/T8760

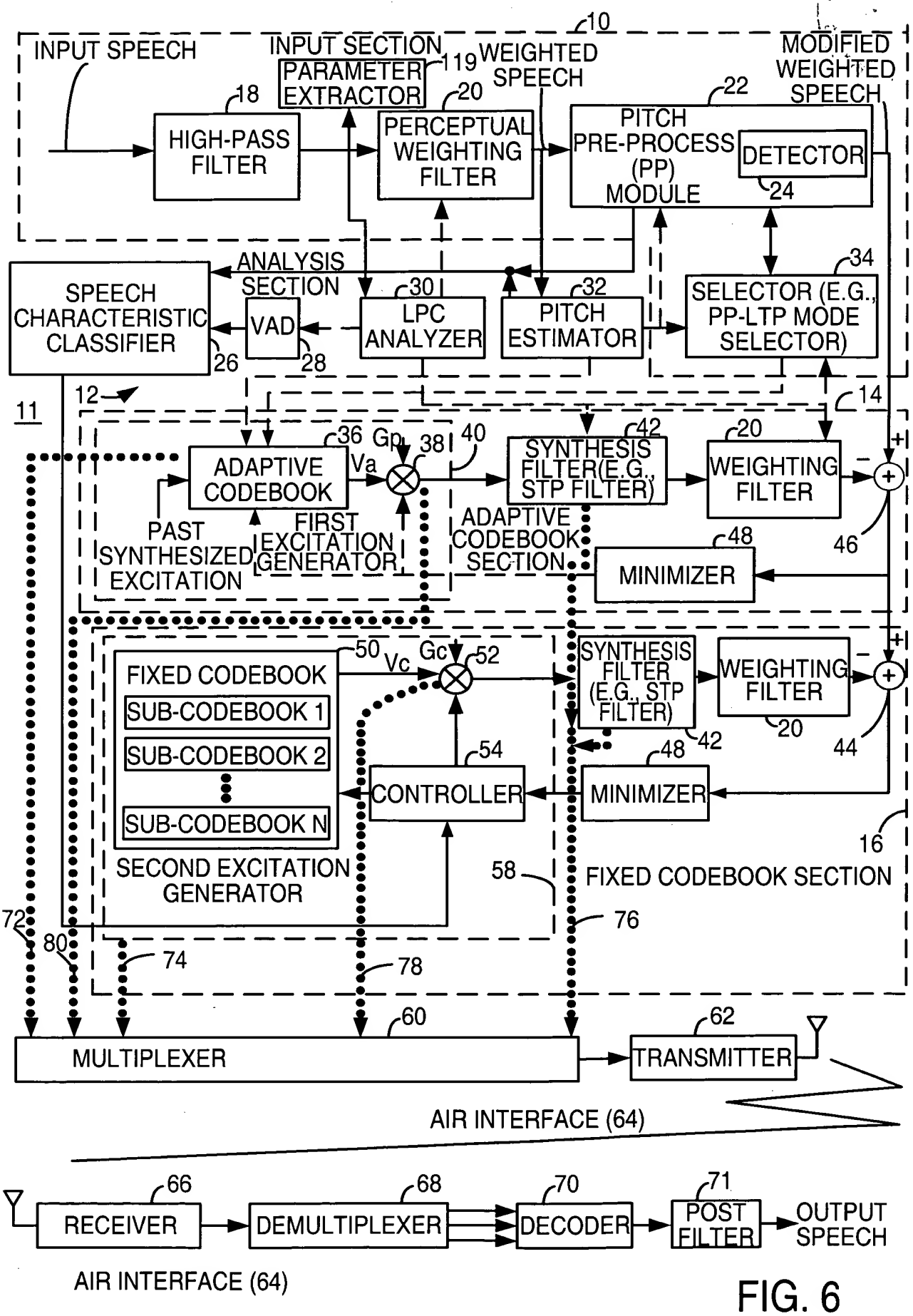

10
INPUT SPEECH
INPUT SECTION
PARAMETER EXTRACTOR
119
WEIGHTED SPEECH
MODIFIED WEIGHTED SPEECH
18
HIGH-PASS FILTER
20
PERCEPTUAL WEIGHTING FILTER
22
PITCH PRE-PROCESS (PP) MODULE
DETECTOR
24
ANALYSIS SECTION
SPEECH CHARACTERISTIC CLASSIFIER
26
VAD
28
30
LPC ANALYZER
32
PITCH ESTIMATOR
34
SELECTOR (E.G., PP-LTP MODE SELECTOR)
11
12
14
36
Gp
38
40
ADAPTIVE CODEBOOK
Va
42
SYNTHESIS FILTER(E.G., STP FILTER)
20
WEIGHTING FILTER
PAST SYNTHESIZED EXCITATION
FIRST EXCITATION GENERATOR
ADAPTIVE CODEBOOK SECTION
48
MINIMIZER
46
50
Vc
Gc
52
FIXED CODEBOOK
SUB-CODEBOOK 1
SUB-CODEBOOK 2
SUB-CODEBOOK N
SECOND EXCITATION GENERATOR
54
CONTROLLER
58
FIXED CODEBOOK SECTION
72
80
74
78
76
16
60
MULTIPLEXER
62
TRANSMITTER
AIR INTERFACE (64)
66
RECEIVER
68
DEMULTIPLEXER
70
DECODER
71
POST FILTER
OUTPUT SPEECH
AIR INTERFACE (64)

FIG. 6

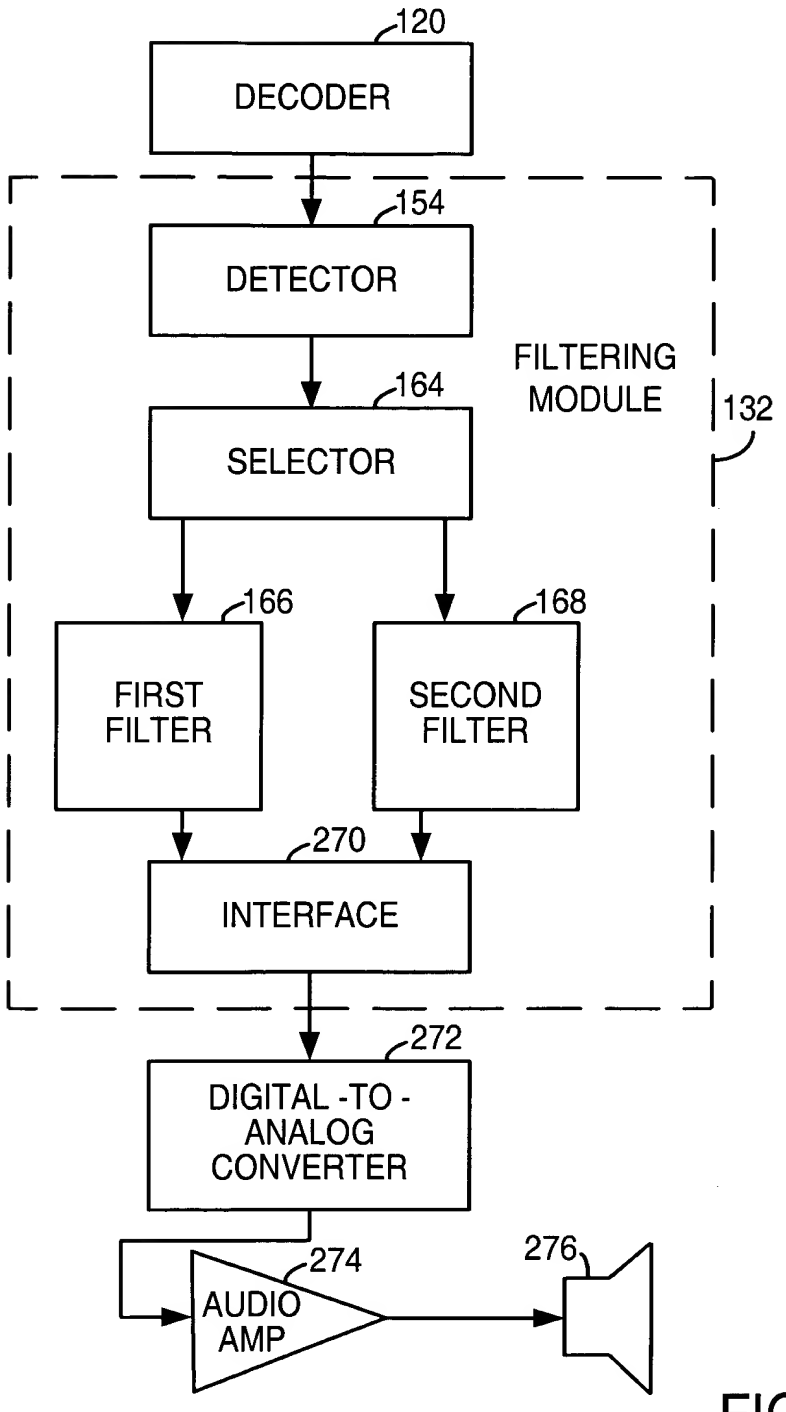


FIG. 7

EDS890 "5E7782760

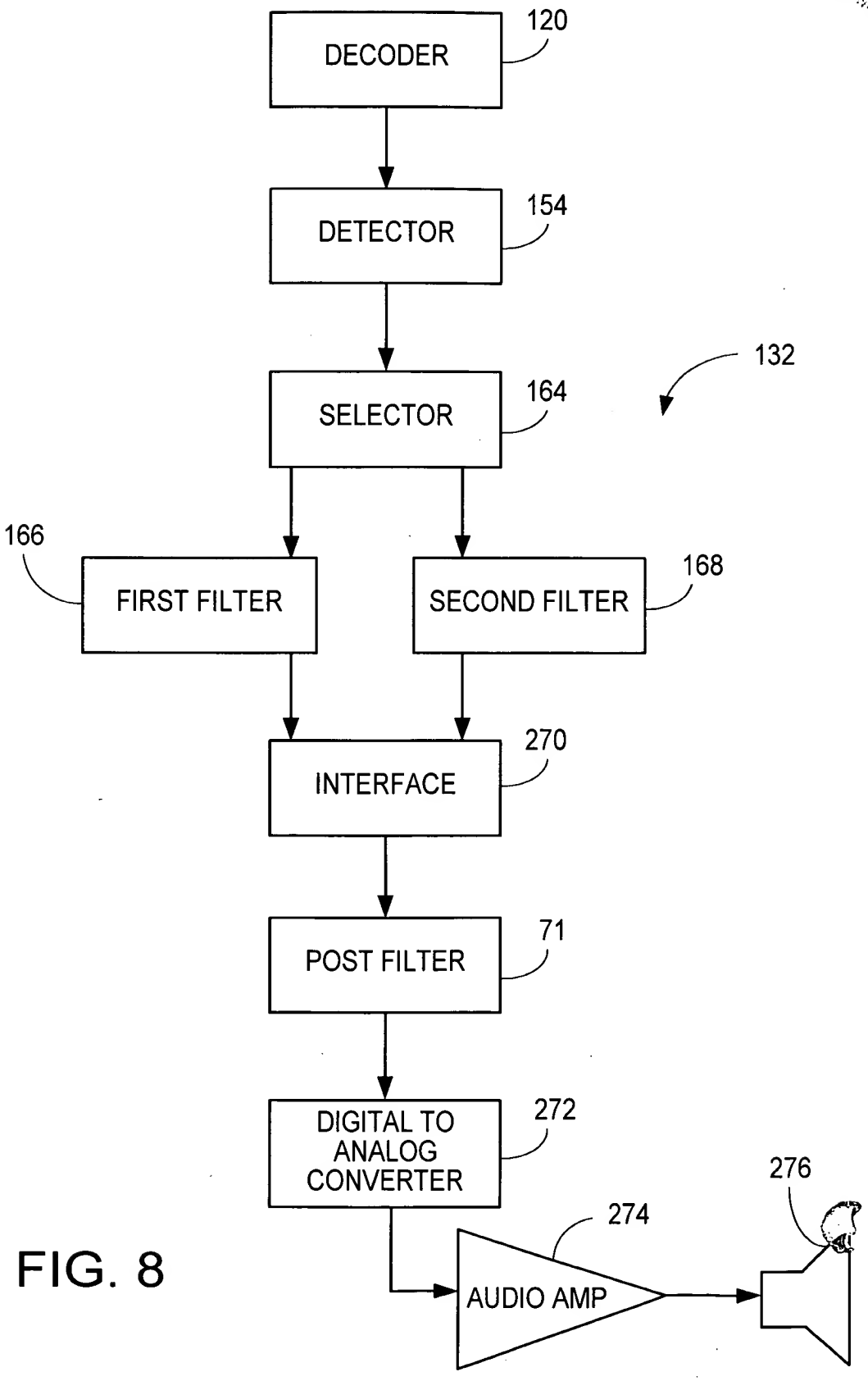

DECODER
120
DETECTOR
154
SELECTOR
164
132
166
FIRST FILTER
SECOND FILTER
168
INTERFACE
270
POST FILTER
71
DIGITAL TO ANALOG CONVERTER
272
276
274
AUDIO AMP

FIG. 8